

**MEMORANDUM**

**September 26, 2007**

**To:** Craig Kinch, District Manager (A)  
Toronto District Office  
Central Region (CR)

**From:** Gary DeBrou, Manager  
Air Monitoring and Reporting Section  
Environmental Monitoring and Reporting Branch (EMRB)

**Re: Mobile TAGA Emergency Response – Jones Auto Wreckers, Toronto, Ontario**

At the request of the Spills Action Centre, the mobile TAGA responded to an industrial fire involving Jones Auto Wreckers located at 1 Thora Avenue in Toronto, Ontario on September 20-21, 2007. Attached is a Technical Memorandum summarizing the TAGA air monitoring results.

The mobile TAGA monitored the air at three different locations downwind of the fire site from 23:29 September 20 to 14:47 September 21, 2007. Acetone, iso-propanol, methyl ethyl ketone, benzene, toluene, styrene, xylenes, trimethyl benzene, butyl benzene, and naphthalene were measured by the TAGA. Levels were well below any applicable Ministry Point of Impingement (POI) air standards and/or guidelines.

For further information regarding this emergency response, contact Dan Orr at (416) 327- 4037.

  
Gary DeBrou

c: John Mayes, EMRB  
Dan Orr, EMRB  
Nick Karellas, EMRB  
Deb Pella Keen, CR  
George Rocoski, CR

## Technical Memorandum



### Mobile TAGA Emergency Response

**INDUSTRIAL FIRE**  
**Jones Auto Wreckers Ltd.**  
**1 Thora Ave., Toronto**

**September 20-21, 2007**

Ontario Ministry of the Environment  
Environmental Monitoring and Reporting Branch  
Air Monitoring and Reporting Section  
125 Resources Road  
Toronto, Ontario M9P 3V6



# TECHNICAL MEMORANDUM

## Mobile TAGA Emergency Response

September 26, 2007

**To:** Dan Orr, Supervisor  
Air Monitoring and Reporting Section (AMRS)  
Environmental Monitoring and Reporting Branch (EMRB)

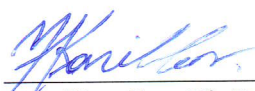
**From:** Nicholas S. Karellas, Senior Research Scientist  
(AMRS, EMRB)

**Re:** Mobile TAGA Emergency Response – Jones Auto Wreckers in Toronto, Ontario

On September 20, 2007 EMRB's mobile Trace Atmospheric Gas Analyzer (TAGA) unit responded to a five-alarm industrial fire involving Jones Auto Wreckers located at 1 Thora Avenue in Toronto, Ontario. An unknown number of vehicles and interior components (dashboards, seating, carpeting, etc) fuelled the fire. The fire caused disruptions in road and GO train traffic and led to evacuation of businesses and residences in the area of Victoria Park and Danforth Avenue. The mobile TAGA, as requested by the Spills Action Centre (SAC), responded to this emergency and conducted air monitoring at three locations (site A, B, C **Figure 1**) downwind of the fire site.

The following ten chemicals were measured by the TAGA: acetone, iso-propanol, methyl ethyl ketone, benzene, toluene, styrene, xylenes, trimethyl benzene, butyl benzene, and naphthalene. The results are summarized in **Table 1**. The highest half-hour concentrations were:  $88 \mu\text{g}/\text{m}^3$  for acetone,  $34 \mu\text{g}/\text{m}^3$  for iso-propanol,  $40 \mu\text{g}/\text{m}^3$  for methyl ethyl ketone,  $20 \mu\text{g}/\text{m}^3$  for benzene,  $74 \mu\text{g}/\text{m}^3$  for toluene,  $20 \mu\text{g}/\text{m}^3$  for styrene,  $107 \mu\text{g}/\text{m}^3$  for xylenes,  $68 \mu\text{g}/\text{m}^3$  for trimethyl benzene,  $15 \mu\text{g}/\text{m}^3$  for butyl benzene, and  $8.7 \mu\text{g}/\text{m}^3$  for naphthalene. These levels are well below applicable Ministry Point of Impingement (POI) air standard and/or guidelines. By the early morning of September 21, TAGA measurements indicated that the levels of the airborne chemicals monitored had decreased to levels typical of urban ambient air. By noon there was no visible smoke and no detectable burning odour from the fire site. The TAGA monitored until 15:00. The TAGA returned to home base at 125 Resources Road 16:20.

All TAGA air monitoring results were regularly conveyed to the Spills Action Centre and to EMRB Director's Office. Preliminary qualitative results were provided to the City of Toronto Fire Department and Office of Emergency Measures at approximately 4 a.m. September 21, so that an informed decision could be made by the municipal representatives concerning the opening of nearby schools.

  
N.S. Karellas, Ph.D.

# Table 1

Half-Hour Average Concentrations ( $\mu\text{g}/\text{m}^3$ ) of the Chemicals Monitored in the Vicinity of Jones Auto Wreckers, Toronto, Ontario. Mobile TAGA (EMRB, MOE) Emergency Response, September 20-21, 2007.

Date	Sample No.	Start Time	Site (1)	WD (2)	WS (2)	AT (2)	Acetone	Iso-propanol	MEK	Benzene	Toluene	Styrene	Xylenes	Trimethyl Benzene	Butyl Benzene	Naphthalene
Sept 20	S01	21:31	A	S	2.1-2.3	18	66	31	17	5.6	20	4.6	29	20	5.4	4.6
Sept 21	S02	00:02	A	SSE	1.6-2.2	17	88	34	15	3.7	20	3.2	27	15	4.0	3.5
Sept 21	S03	00:48	B	NE	1.9-2.1	17	55	32	14	7.6	46	13	67	43	9.8	6.6
Sept 21	S04	01:19	B	NNE	1.9-2.3	16	37	26	14	10	61	18	89	54	12	7.2
Sept 21	S05	01:49	B	NNE	1.9-4.9	17	18	19	13	13	69	20	107	68	15	8.7
Sept 21	S06	02:19	B	NE	1.9-4.5	16	6.7	7.9	7.7	6.0	30	8.5	49	26	6.4	4.1
Sept 21	S07	02:49	B	NE	2.0-2.8	16	4.7	6.8	6.6	10	34	15	54	27	6.0	5.5
Sept 21	S08	03:19	B	NNE	2.0-4.1	16	2.7	4.7	5.0	5.2	28	9.0	47	24	5.2	3.6
Sept 21	S09	03:49	B	NE	2.0-4.1	16	11	28	35	20	74	6.9	56	25	4.5	2.7
Sept 21	S10	04:19	B	NE	2.4-2.8	16	11	29	40	19	72	6.0	49	19	3.4	2.2
Sept 21	S11	04:49	B	NE	2.5-3.7	16	1.6	3.2	3.5	3.8	22	6.9	34	12	3.8	2.7
Sept 21	S12	05:19	B	NE	1.8-2.8	15	1.6	4.0	3.4	4.8	36	9.2	57	21	6.6	3.4
Sept 21	S13	05:49	B	NNE	1.9-2.1	15	1.7	4.0	3.8	6.5	43	14	64	21	6.4	3.8
Sept 21	S14	06:19	B	E	1.6-4.2	16	1.2	2.8	2.7	5.4	38	13	58	16	6.3	3.7
Sept 21	S15	06:49	B	E	2.6-3.3	16	<1	1.4	1.7	2.1	15	5.5	23	2.7	2.4	1.3
Sept 21	S16	07:20	B	E	4.0-5.6	17	<1	<1	1.5	<1	3.4	<1	4.1	<1	<1	<1

Mobile TAGA (EMRB, MOE) Emergency Response, Toronto, Ontario, September 20, 2007.



**Table 1 (continued)**

**Half-Hour Average Concentrations ( $\mu\text{g}/\text{m}^3$ ) of the Chemicals Monitored in the Vicinity of Jones Auto Wreckers, Toronto, Ontario. Mobile TAGA (EMRB, MOE) Emergency Response, September 20-21, 2007.**

Sept 21	S17	08:00	B	E	5.5-7.5	18	<1	<1	<1	1.2	<1	1.9	<1	1.9	<1	<1	<1
Sept 21	S18	08:47	C	ESE	4.0-7.4	20	<1	<1	<1	1.2	<1	3.8	<1	3.7	<1	<1	<1
Sept 21	S19	09:17	C	ESE	6.1-8.8	20	<1	<1	<1	1.2	<1	4.3	<1	3.1	<1	<1	<1
Sept 21	S20	09:47	C	ESE	5.4-8.1	21	<1	<1	<1	1.2	<1	4.8	<1	2.8	<1	<1	<1
Sept 21	S21	10:17	C	ESE	5.6-8.4	22	<1	<1	<1	1.1	<1	3.2	<1	2.5	<1	<1	<1
Sept 21	S22	10:47	C	ESE	6.7-8.0	22	<1	<1	<1	1.0	<1	3.2	<1	2.8	<1	<1	<1
Sept 21	S23	11:17	C	ESE	7.5-8.5	22	<1	<1	<1	1.0	<1	3.9	<1	3.5	<1	<1	<1
Sept 21	S24	11:47	C	ESE	5.4-6.3	22	<1	<1	<1	<1	<1	2.5	<1	2.1	<1	<1	<1
Sept 21	S25	12:17	C	ESE	6.3-7.6	23	<1	<1	<1	<1	<1	2.0	<1	1.5	<1	<1	<1
Sept 21	S26	12:47	C	SE	3.2-6.0	25	<1	<1	<1	<1	<1	2.4	<1	1.7	<1	<1	<1
Sept 21	S27	13:17	C	SW	7.5-9.3	26	<1	<1	<1	<1	<1	1.6	<1	1.3	<1	<1	<1
Sept 21	S27	13:47	C	WSW	8.2-9.3	26	<1	<1	<1	<1	<1	1.1	<1	<1	<1	<1	<1
Sept 21	S29	14:17	C	WSW	6.7-9.0	27	<1	<1	<1	<1	<1	1.5	<1	1.2	<1	<1	<1

**Note:** 1. See Figure 1 for TAGA (Explorer) monitoring locations in the vicinity of Jones Auto Wreckers, Toronto, Ontario.

2. Meteorological conditions on-site: WD = predominant wind direction; WS = range of wind speeds (km/hr); AT = ambient temperature ( $^{\circ}\text{C}$ ).

**Ministry POI Criteria:**

Acetone =  $48,000 \mu\text{g}/\text{m}^3$  (S); Iso-propanol =  $24,000 \mu\text{g}/\text{m}^3$  (G); Methyl Ethyl Ketone (MEK) =  $30,000 \mu\text{g}/\text{m}^3$  (S); Benzene = not available;; Toluene =  $2,000 \mu\text{g}/\text{m}^3$  (S);

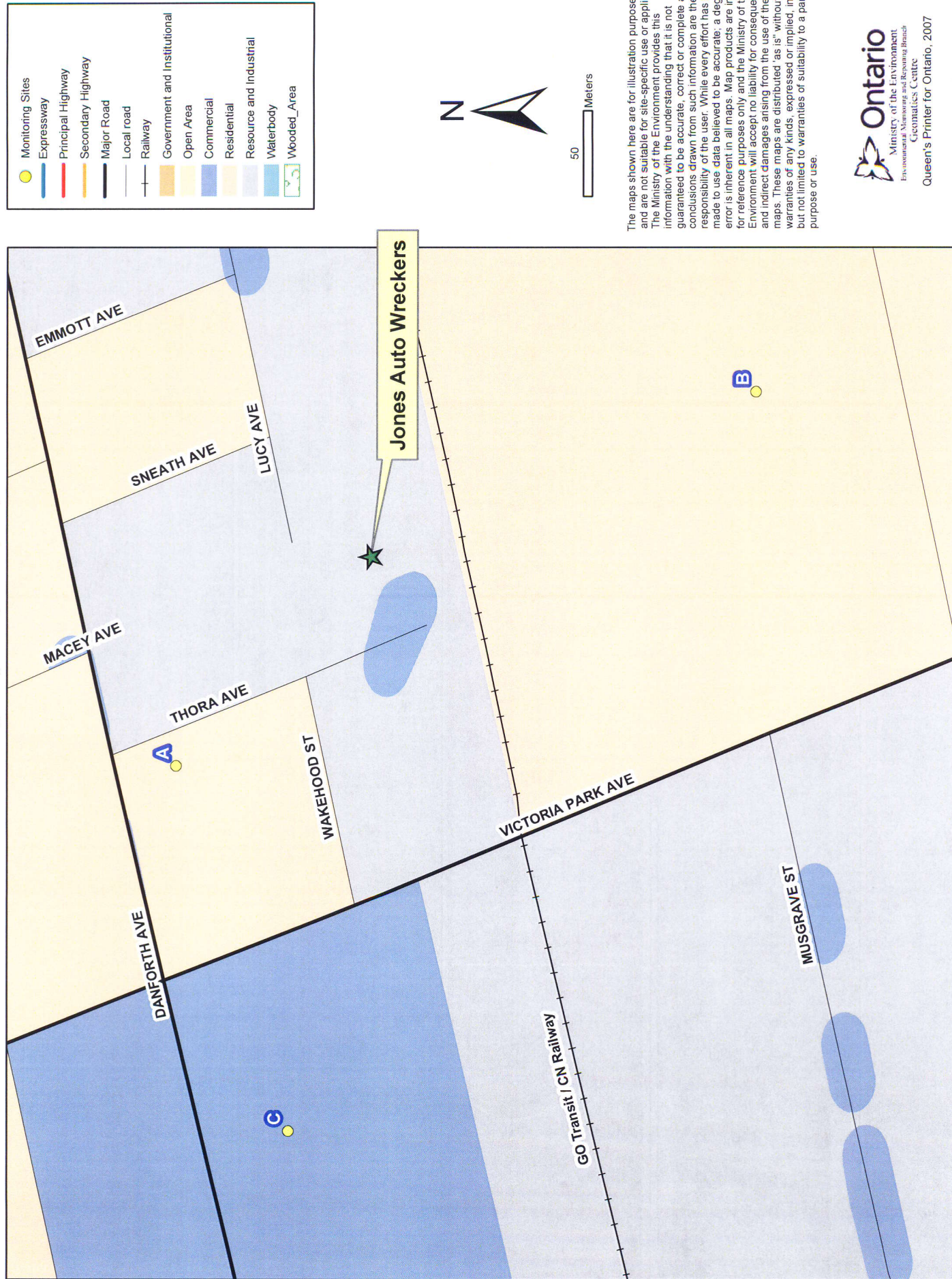
Styrene =  $400 \mu\text{g}/\text{m}^3$  (S); Xylenes =  $2,300 \mu\text{g}/\text{m}^3$  (S), 1,2,4-Trimethyl Benzene =  $500 \mu\text{g}/\text{m}^3$  (G), Butyl Benzene = not available; Napthalene =  $36 \mu\text{g}/\text{m}^3$  (G),.

S = Standard, G = Guideline. Summary of Ontario Regulation 419/05 Standards and Point of Impingement Guidelines, and Ambient Air Quality Criteria (AAQCs), Standards Development Branch, Ontario Ministry of the Environment, December, 2005.

*Mobile TAGA (EMRB, MOE) Emergency Response, Toronto, Ontario, September 20, 2007.*



**Figure 1: Monitoring Sites in the Vicinity of Jones Auto Wreckers, Toronto, Ontario.  
Mobile TAGA Emergency Response, September 20-21, 2007.**



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